



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,661	09/10/2003	John Peter Roquemore III	11263.00	3687
26884	7590	10/16/2006	EXAMINER	
PAUL W. MARTIN NCR CORPORATION, LAW DEPT. 1700 S. PATTERSON BLVD. DAYTON, OH 45479-0001			AU, SCOTT D	
			ART UNIT	PAPER NUMBER
			2612	

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/659,661

Applicant(s)

ROQUEMORE, JOHN PETER

Examiner

Scott Au

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This communication is in response to applicant's response to an Appeal Brief, which is filed August 9, 2006.

The claims 1-16 have been entered and made of record in the Application of Roquenmore for a "Dual-communication electronic shelf label system and method" filed September 10, 2003.

Claims 1-16 are pending.

In view of the Roquenmore filed on August 9, 2006, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Response to Arguments

Applicant's arguments with respect to claims 1-9 and 12 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalton et al. (US# 6,419,154) in view of Matsushita (US# 6,762,674) and further in view of Ramamurthy et al. (US# 6,853,294).

Referring to claim 1, Dalton et al. disclose an electronic shelf label system comprising:

a base station (120) (i.e. relay unit) including first wireless downlink communication circuitry (304) (i.e. transmitter circuitry of relay unit 120) and first wireless uplink communication circuitry (205) (i.e. transmitter circuitry of tag 122); and plurality of electronic shelf labels, each electronic shelf label including second wireless downlink communication circuitry(206) (i.e. receiver circuitry of tag 122) for receiving

Art Unit: 2612

messages from first wireless downlink communication circuitry of the base station (120) (i.e. relay unit), and second wireless uplink communication circuitry (312) (i.e. receiver circuitry of relay unit 120) for sending messages to first wireless uplink communication circuitry of the base station (120) (i.e. relay unit) (col. 3 lines 17-65; see Figures 1-3).

However, Dalton et al. did not explicitly disclose the first wireless uplink operating in a different mode than the first wireless downlink communication circuitry and wherein the base station operates to concurrently transmit a first message to a first electronic shelf label and receive a second message from the second electronic shelf.

In the same field of endeavor of inventory system, Matsushita suggests the first wireless uplink operating in a different mode than the first wireless downlink communication circuitry (i.e. different mode operation of transmitting and receiving at different frequency, col. 5 lines 16-23; see Figure 5).

One ordinary skill in the art understands that different mode operation of transmitting and receiving at different frequency of Matsushita is desirable in the inventory system of Dalton et al. suggest the electronic shelf label systems of having the downlink communications path is separate from and may employ different technology than the uplink communication path (col. 1 line 29-38) and Matsushita suggests the electronic shelf label systems wherein the tag transmitting section is operated at a lower frequency of 300 Mhz and the receiving section is received at the frequency band of 2.4GHz (col. 5 lines 16-67). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include different mode operation of transmitting and receiving at different frequency of

Matsushita in the inventory system of Dalton et al. with the motivation for doing so would allow the longer life of the battery of the tag.

However, Dalton et al. in view Matsushita did not explicitly disclose wherein the base station operates to concurrently transmit a first message to a first electronic shelf label and receive a second message from the second electronic shelf.

In the same field of endeavor of RF communication system, Ramamurthy et al. teach wherein the RFID reader (40) employs with concurrent transmitting and receiving communications mode (col. 5 lines 34-38).

One ordinary skill in the art understands that having RFID reader (40) operates transmitting and receiving simultaneously from the tags is desirable in the inventory system of Dalton et al. in view of Matsushita because Dalton et al. suggest the communication transmitting link 126 and receiving link 127 between base station 120 (i.e. relay unit) and the ESLs 122 (col. 3 lines 1-17) and Ramamurthy et al. teach the reader (40) transmitting and receiving data from the tags simultaneously (col. 5 lines 34-38). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include simultaneously transmitting and receiving data function of Ramamurthy et al. in the inventory system of Dalton et al. in view of Matsushita with the motivation for doing so would increase the operation speed.

Referring to claim 2, Dalton et al. in view of Matsushita and Ramamurthy et al. disclose the system of claim 1, Dalton et al. disclose further comprising a computer (102) (i.e. host computer) coupled to the base station (120) (i.e. relay unit) via a cable

Art Unit: 2612

for sending messages to the electronic shelf labels via the first and second wireless downlink communication circuitries, and for receiving messages from the electronic shelf label via the first and second wireless uplink communication circuitries (col. 2 line 64 to col. 3 line 8).

Referring to claim 3, Dalton et al. in view of Matsushita and Ramamurthy et al. disclose the system of claim 1, Matsushita discloses wherein the first and second wireless downlink communication circuitries communicate at a first frequency and the first and second wireless uplink communication circuitries communicate at a second frequency different than the first frequency (col. 5 lines 16-67; see Figure 5).

Referring to claim 4, Dalton et al. in view of Matsushita and Ramamurthy et al. disclose the system of claim 1, Matsushita discloses wherein the first and second wireless downlink communication circuitries communicate in a first communication band and the first and second wireless uplink communication circuitries communicate in a second communication band different than the first communication band (col. 5 lines 16-67; see Figure 5).

Referring to claim 5, Dalton et al. in view of Matsushita and Ramamurthy et al. disclose the system of claim 1, Matsushita discloses wherein the first and second wireless downlink communication circuitries communicate at a frequency of about 2.4 GHz (col. 5 lines 16-67; see Figure 5) and Dalton et al. disclose the first and second

Art Unit: 2612

wireless uplink communication circuitries communicate at an infrared frequency (col. 2 line 64 to col. 3 line 8).

Referring to claim 6, Dalton et al. in view of Matsushita and Ramamurthy et al. disclose the system of claim 1, Matsushita discloses wherein the first and second wireless downlink communication circuitries communicate at a frequency of about 2.4 GHZ (col. 5 lines 16-67; see Figure 5) and it is conventional in the art for one ordinary skill to use inductance coupling a communication path between devices.

Referring to claim 7, Dalton et al. in view of Matsushita and Ramamurthy et al. disclose the system of claim 1, Matsushita discloses wherein the first and second wireless downlink communication circuitries communicate at a first frequency of about 2.4 GHz and the first and second wireless uplink communication circuitries communicate at a second frequency substantially lower than the first frequency (col. 5 lines 16-67).

Referring to claim 8, Dalton et al. in view of Matsushita and Ramamurthy et al. disclose the system of claim 7, Matsushita discloses wherein the second frequency is at 300 MHz which is closed about 400 MHz. Therefore, it is obvious for one ordinary skill in the art to understand that the transmitted signal from the tag is weaker than the received signal and is upon an individual to set the frequency band that best fit the transmission from the tag.

Claims 10-11 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalton et al. (US# 6,419,154) in view of Matsushita (US# 6,762,674) and further in view of Neumark (US# 6,736,316).

Referring to claim 10, Dalton et al. disclose a method of communication between a base station (120) (i.e. relay unit) and a plurality of electronic shelf labels comprising of:

- wirelessly sending a first message in a first time period to a first electronic shelf label utilizing first downlink communication circuitry (304) (i.e. transmitter circuitry of relay unit 120) in the base station (120) (i.e. relay unit);

- receiving the message utilizing second downlink communication circuitry (206) (i.e. receiver circuitry of tag 122) in first electronic shelf label (i.e. tag 122);

- wirelessly sending a response to the base station in a second time period to the first uplink communication circuitry (205) (i.e. transmitter circuitry of tag 122) in the electronic shelf label;

- receiving the response in a second time period from the first electronic shelf label utilizing second uplink communication circuitry (312) (i.e. receiver circuitry of relay unit 120) in the base station (120) (i.e. relay unit); and

- wirelessly sending a second message during the second time period to a second electronic shelf label utilizing the first downlink communication circuitry in the base station (120) (i.e. relay unit) (col. 3 lines 17-65; see Figures 1-3).

However, Dalton et al. did not explicitly disclose a method of a duplex data communication between a base station and a plurality of electronic shelf labels and the base station using a different mode of communication.

In the same field of endeavor of inventory system, Matsushita suggests the base station using a different mode of communication (i.e. different mode operation of transmitting and receiving at different frequency, col. 5 lines 16-23; see Figure 5).

One ordinary skill in the art understands that different mode operation of transmitting and receiving at different frequency of Matsushita is desirable in the inventory system of Dalton et al. suggest the electronic shelf label systems of having the downlink communications path is separate from and may employ different technology than the uplink communication path (col. 1 line 29-38) and Matsushita suggests the electronic shelf label systems wherein the tag transmitting section is operated at a lower frequency of 300 Mhz and the receiving section is received at the frequency band of 2.4GHz (col. 5 lines 16-67). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include different mode operation of transmitting and receiving at different frequency of Matsushita in the inventory system of Dalton et al. with the motivation for doing so would allow the longer life of the battery of the tag.

However, Dalton et al. in view Matsushita did not explicitly disclose a method of a duplex data communication between a base station and a plurality of electronic shelf labels.

Art Unit: 2612

In the same field of endeavor of inventory system, Neumark discloses a method of having a full duplex electronic labeling system and is an advantageously employed in stores and retail establishments (col. 4 lines 22-39).

One ordinary skill in the art understands that having a full duplex electronic labeling system of Neumark is desirable in the inventory system of Dalton et al. in view of Matsushita because Dalton et al. suggest the communication transmitting link 126 and receiving link 127 between base station 120 (i.e. relay unit) and the ESLs 122 (col. 3 lines 1-17) and Neumark teaches a duplex communication method in the electronic labeling system is advantageously employed in stores and retail establishments.

Referring to claim 11, Dalton et al. in view of Matsushita and Neumark disclose the method of claim 10 above, Dalton et al. disclose the steps of:

sending the message to the base station through a cable by a computer; and
receiving the response through the cable by the computer (col. 2 line 64 to col. 3 line 8).

Referring to claim 13, Dalton et al. in view of Matsushita and Neumark disclose the method of claim 10 above, Matsushita disclose wherein the first and second wireless downlink communication circuitries communication at a first frequency and the first and second wireless uplink circuitries communicate at a second frequency different than the first frequency (col. 5 lines 16-67; see Figure 5).

Referring to claim 14, Dalton et al. in view of Matsushita and Neumark disclose the method of claim 13 above, Matsushita discloses wherein the first frequency is approximately 2.4 GHz (col. 5 lines 16-67; see Figure 5).

Referring to claim 15, Dalton et al. in view of Matsushita and Neumark disclose the method of claim 13 above, Matsushita discloses wherein the second frequency is at 300 MHz which is closed about 400 MHz. Therefore, it is obvious for one ordinary skill in the art to understand that the transmitted signal from the tag is weaker than the received signal and is upon an individual to set the frequency band that best fit the transmission from the tag.

Referring to claim 16, Dalton et al. in view of Matsushita and Neumark disclose the method of claim 13 above, Dalton et al. disclose wherein the second frequency is an infrared frequency (col. 3 lines 1-9).

Claims 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalton et al. (US# 6,419,154) in view of Matsushita (US# 6,762,674) and further in view of Neumark (US# 6,736,316) and Ramamurthy et al. (US# 6,853,294).

Referring to claims 9 and 12, Dalton et al. in view of Matsushita, Ramamurthy et al. and Neumark disclose the electronic shelf label system, to the extent as claimed with respect to claims 1 and 10 above, and the system and method further including:

Art Unit: 2612

the first wireless uplink communication circuitry operating at a substantially lower frequency than the first wireless downlink communication circuitry (col. 5 lines 15-67, Matsushita); and a computer (102) (i.e. host computer) coupled to the base station (120) (i.e. relay unit) via a cable for sending messages to the electronic shelf label via the first and second wireless downlink communication circuitries, and for receiving messages from the electronic shelf label via the first and second wireless uplink communication circuitries (col. 2 line 64 to col. 3 line 8, see Dalton et al.).


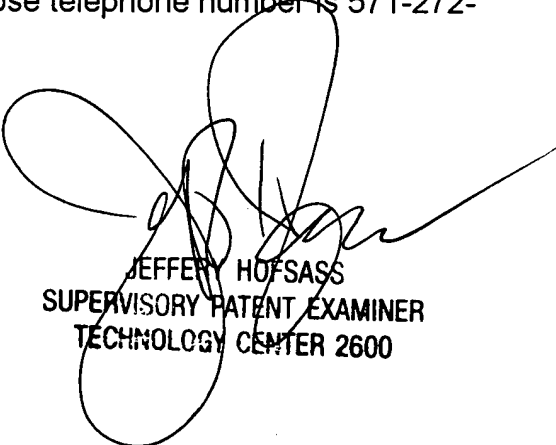
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Au whose telephone number is (571) 272-3063. The examiner can normally be reached on Mon-Fri, 8:30AM – 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached at (571) 272-2981. The fax phone numbers for the organization where this application or proceeding is assigned are (571)-272-1817.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-3050.

Scott Au


10/11/06
JEFFERY HOF SASS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600